

VIA UPS

Mr. David Keith
Project Coordinator
Anchor QEA, LLC
614 Magnolia Avenue
Ocean Springs, MS 39654

RE: Draft Remedial Alternatives Memorandum
San Jacinto River Waste Pits Superfund Site, Harris County, Texas
Unilateral Administrative Order, CERCLA Docket No. 06-03-10

Dear Mr. Keith:

The Environmental Protection Agency (EPA) and other agencies have performed reviews of the above referenced document dated January 2012. The enclosed comments shall be incorporated in the Final Remedial Alternatives Memorandum and copies provided for review and approval in accordance with the approved schedule.

If you have any questions, please contact me at (214) 665-8318, or send an e-mail message to miller.garyg@epa.gov.

Sincerely yours,

Gary Miller
Remediation Project Manager

Enclosure

cc: Luda Voskov (TCEQ)
Bob Allen (Harris County)
Nicole Hausler (Port of Houston)
Jessica White (NOAA)

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Comments

Draft Remedial Alternatives Memorandum dated January 2012

1. **(Section 1.1, p. 1):** The Memorandum comprises the preliminary screening of potential remedial alternatives for sediment at the subject site. Typically, potential remedial alternatives are identified by their capacity to address the response action objectives (RAOs) based on remedial action levels (RALs) at a site. However, the specific response action objectives (necessary to technology evaluations) are subject to the results of the Remedial Investigation Report.
2. **(Section 1.4, p. 4):** This section refers to remedies in the site perimeter area, but the remedy may go beyond this perimeter. The memorandum shall include the possibility of remediating beyond the depicted site perimeter as appropriate based on risk.
3. **(Section 2.1.2.1, p. 8):** Reference is made to current uses, citing a depth of 12 ft, but uses by shoreline developments, construction and maintenance work, and the Port of Houston Authority (PHA) development plans may require remedial planning for deeper depths in the future. The memorandum shall incorporate this possibility.
4. **(Section 2.2.1, p. 10):** The navigation section shall address the probable future navigational needs for the area, as the River uses change and river front property is redeveloped.
5. **(Section 2.2.4, p. 15):** Reference to PHA regulation of uses "as it sees fit" shall be revised to say, "consistent with its authority and responsibilities."
6. **(Section 2.2.5, p. 15):** This section includes a discussion of access. A map extending at least one mile upstream and one mile downstream from the site perimeter shall be included to show shoreline access locations (including those presently fenced) where public, private or trespassers may access the shoreline.
7. **(Section 2.4.1, p. 25):** Based on these facts ("strong winds from the north can cause water to be transported out of the Galveston Bay system, which can result in water levels that are much lower than low tide elevations"), this section shall acknowledge that the risk assessment will consider that under north wind conditions, persons accessing the shoreline may be exposed to sediment that is normally under deeper water.
8. **(Section 2.4.2, p. 27):** When considering erosion, respondents shall include an analysis of (1) subsidence, (2) sea level rise, and (3) the potential for the channel to meander. The current navigation channel is self maintaining, and the vessels use the existing channel thalweg. However, there is potential for this channel to migrate in the future.
9. **(Section 2.4.3, p. 27):** The long-term sedimentation estimates shall take into consideration the limited sediment sources due to upstream dam and items listed in comment above. Land use restrictions, discharge limitations, storm water permitting and other regulatory

developments may reduce future sediment loads to the River, and, therefore, the possibility of sedimentation mitigating the risks of contaminated sediments.

10. **(Section 3.2, p. 31):** The Remedial Action Objective (RAO) 1 shall be modified to include the entire site, including the area south of 1-10.
11. **(Section 3.3, p. 33):** An additional RAO shall be included for upland areas affected by site wastes to appropriate cleanup levels to reduce human exposures to site wastes from direct contact with soils.
12. **(Section 3.3, p. 33):** Pathway elimination RAOs include the provision for a lifetime excess cancer risk greater than 10^{-4} (RAO 2 and RAO 3). However, under TRRP [30 TAC 350.72(c)] only the *cumulative* excess cancer risk for multiple contaminants of concern (COCs) greater than 10^{-4} is permitted. Otherwise, TRRP specifies an excess cancer risk of 10^{-5} for each individual COC [350.72(a)(1)]. The subject report and the subsequent risk assessment shall incorporate the *cumulative* risk value of 10^{-4} as appropriate.
13. **(Section 3.4.1, p. 34):** Samples from 6 inches alone are not sufficient for surface chemistry data. At many locations the 0-1 ft sample far exceeds the concentration in the 0-6 in sample. This indicates that the 6 in sample may not be representative, or at least, there are only 6 in of less contaminated cover over more contaminated sediment. This is not sufficient to protect against exposure of burrowing biota, or after sediment disturbance, or exposure of humans accessing the area. The surface chemistry shall be based on the 0-1 ft data.
14. **(Section 3.4.3, p. 35):** The methodology comprising the determination of surface weighted average concentrations (SWACs), per Equation 3-1, effectively averages sediment concentrations on an area-wide scale. Such a method will tend to obscure specific wildlife exposure areas and/or hot spots that may invoke separate RALs. Submittal of an analysis of such areas in the Remedial Investigation Report is pending and its results may preclude the use of SWACs on a site-wide basis.
15. **(Section 3.4.3, p. 36):** The lowest concentration evaluated was 10 parts per trillion (ppt), yet the EPA residential screening level for dioxins is 4.5 ppt (based on the Cal EPA cancer slope factor of $1.3 \cdot 10^{-4} \text{ (pg/kg-day)}^{-1}$). The Thiessen polygons shall be extended outward to include areas with this level of contamination for analysis purposes. The matrix of concentrations versus polygon areas must be provided for stakeholders to adequately review the Remedial Alternatives Memo.

----- [go from here for PHA comments]

16. **(Section 4.4.6, p. 75):** The memo shall provide more detail regarding the technologies that were ruled out.
17. **(Section 4.4.6.1.1, p. 76):** The memo shall note that incineration would likely be preceded by a de-watering process.

18. **(Section 4.5.3, p. 89):** Beneficial use is ruled out because it would not meet "criteria" but the criteria are not defined. The memo shall include a description of the criteria. Further, the "BioGenesis" technology for beneficial use shall be considered.
19. **(Section 5.2, p. 100):** The preliminary remedial alternative details described in Section 5.2 (*including* Table 5-4 and Table 5-5) are based on hypothetical values for remedial action levels (RALs) and surface weighted average concentrations (SWACs) which have not yet been proposed (see comment above for section 3.3). Upon formal acceptance of the actual proposed values for RALs and SWACs, the specific estimates of areas and volumes of sediment associated with the preliminary sediment management areas (SMAs) (e.g., Table 5-4 and Table 5-5) will be subject to revision.